WEST Search History

DATE: Friday, June 27, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=AND			
L1	clements.in. and ct and lt	9	L1
DB=PGPB; PLUR=YES; OP=AND			
L2	clements.in. and ct and lt	1	L2
L3	((lta or lt-a) near3 (ctb or ct-b))	2	L3
DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=AND			
L4	L3	2	L4
L5	((lta or lt-a) near3 (ctb or ct-b))	5	L5

END OF SEARCH HISTORY

can still associate with the B, preferably the Al part of the A subunit is conserved to facilitate C-terminus association of A subunit with the B subunit pentamer to form fused LT or CT holotoxin.

Detailed Description Text (14):
Besides the LT enterotoxint the cholera toxin, the PapG protein adhesion that specifically binds to alpha-D-galactopyranosyl-(1,4)-beta-D-galactopyranoside, or the invasions causing penetration of bacteria through epithelial cell membranes as identified in a clone from Yersinia pseudotuberculosis, Shigella, and Salmonella can also be used in the present invention. The inventors believe that the inclusion of DNA sequences coding for either LT-B, CT-B, LT-B and LT-A, or CT-B and CT-A will facilitate the transportation into cells of the intestinal mucosa of the gene fusion of other vaccine antigens and will lead to enhanced mucosal and humoral immune responses to the other antigens. Thus, the LT-B or CT-B pentamers or holotoxin components of the fusion proteins should act as adjuvants to enhance the immune response to the fused antigens, especially when the fused LT-B or CT-B pentamers or LT or CT holotoxin is retained in the salvage compartment of the transformed plants.

Detailed Description Text (18):
Moreover, this invention is also directed to the transformation of plants or plant tissues with synthetic DNA sequences encoding LT-B and/or LT-A and/or CT-B and/or CT-A where the bacterially preferred amino acid codons have been systematically replaced by plant preferred amino acid codons. This replacement or substitution of plant preferred codons for the corresponding bacteria preferred condon will further enhance the transgenic plant expression of the LT-B and/or LT-A and/or CT-B and/or CT-A proteins and/or facilitate the expression of the protein in a particular part of the plant.

WEST

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L5: Entry 3 of 5 File: USPT May 28, 2002

DOCUMENT-IDENTIFIER: US 6395964 B1
TITLE: Oral immunization with transgenic plants

Brief Summary Text (96):
The present invention also provides for transgenic plants usable as oral vaccines or oral vaccine adjuvants wherein the plants comprise or express a DNA sequence encoding an LT-B or CT-B containing protein, sequences encoding proteins containing components of LT-A or CT-A or protein components of LT-A or CT-A, and sequences encoding cellular signal and retention polypeptides or proteins, where the LT-B, CT-B, LT-A, and/or CT-A proteins may include fusions of other antigenic agents. Additionally, the DNA sequence can include encoding elements for the coordinate expression of other non-LT or non-CT antigens. Further, the present invention also provides for the coexpression and/or coprovision of other antigens, such as viral antigens, along with LT-B antigen such that the additional antigens can benefit from the adjuvant effect of the transgenic LT-B. In addition, the present invention provides for the coexpression of both the LT-A and LT-B subunits such that the holotoxin can be assembled in the plant tissue to act as both an immunogen and an adjuvant.

Detailed Description Text (12):
In another preferred embodiment of this invention, the LT holotoxin can be produced in transformed plants by stable or transient incorporation of DNA coding for an LT-B or CT-B containing protein and an LT-A or CT-A containing protein. Again the preferred LT-B or CT-B containing proteins are those that have C-terminus modifications to include an ER retention sequence with LT-B or CT-B containing proteins having N-terminus ER signal sequences and C-terminus ER retention sequences being particularly preferred. It is thought that the presence and retention of holotoxin in the plant cells may act as even a better adjuvant for enhanced secretory immune response in some circumstances.

Detailed Description Text (13):
Additionally, fusion proteins of both the LT-B or CT-B containing protein and LT-A containing protein can be stably or transiently incorporated into plant cells in such a way that the fusion modified LT-B or CT-B pentamer and/or LT or CT holotoxins are formed and retained in the cell in ER recycling vesicles or ER salvage vesicles. These vesicles are believed to form or bud on the ER surface, but instead of migrating to cell machinery that direct the vesicles to other parts of the cell, the vesicles recycle back to the ER. Thus, fusing a gene for a given colonization and/or virulence antigen to an N-terminal or C-terminal sequence encoding the LT enterotoxin subunits or the CT toxin subunits can be used to enhance immune responses to other antigens, such as viral antigens such as the Norwalk virus capsid protein or antigens of Newcastle disease virus. Of course, the fusions must be of such a nature as to not destroy the ability for the B unit of LT or CT to form pentamers or to inhibit or prevent their ability to bind to GM-1 ganglioside. Additionally, for LT or CT coding frames that have LT-A or CT-A elements, the A or B subunit fusions must be designed so that the A subunit

YSTEM:OS - DIALOG OneSearch
File 155:MEDLINE(R) 1966-2003/Jun W4
(c) format only 2003 The Dialog Corp.
***File 155: Medline has been reloaded and accession numbers have**
changed. Please see HELP NEWS 155.
File 349:PCT FULLTEXT 1979-2002/UB=20030626,UT=20030619
(c) 2003 WIPO/Univentio
File 5:Biosis Previews(R) 1969-2003/Jun W4
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File 357:Derwent Biotech Res. _1982-2003/Jun W4
(c) 2003 Thomson Derwent & ISI
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Alert feature enhanced for multiple files, etc. See HELP ALERT.
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removal, customized scheduling. See HELP ALERT.
File 440:Current Contents Search(R) 1990-2003/Jun 27
(c) 2003 Inst for Sci Info
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File 144:Pascal 1973-2003/Jun W2
(c) 2003 INIST/CNRS

Set	Items	Description
Executing TD718		
>>>SET HILIGHT: use ON, OFF, or 1-5 characters		
	27229	ARABINOSE?
	685027	PROMOTER?
	12991	CTX
	101480	CHOLERA?
	2393	HOLOTOXIN?
S1	23	(ARABINOSE? (10N) PROMOTER?) (100N) (CTX OR CHOLERA? OR HOLOTOXIN?)

?rd
>>>Duplicate detection is not supported for File 349.

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...completed examining records

S2	13	RD (unique items)

?t s2/6,kwic/all

2/6,KWIC/1 (Item 1 from file: 155)
DIALOG(R)File 155:(c) format only 2003 The Dialog Corp. All rts. reserv.

10042829 21980622 PMID: 11972052
YgbQ, a cell division protein in Escherichia coli and Vibrio cholerae, localizes in codependent fashion with FtsL to the division site.
Apr 30 2002

YgbQ is a cell division protein in Escherichia coli and Vibrio **cholerae** . In E. coli the ygbQ gene was discovered as a result of a computer search ...

... coli genome designed to find potential interacting partners for cell division protein FtsL. In V. **cholerae** , ygbQ was identified as an essential gene by using a transposon that fuses genes to an **arabinose promoter** . The role of YgbQ in cell division is supported by the following. Cells depleted of...

2/6,KWIC/2 (Item 1 from file: 349)

00966051

MUTANT FORMS OF CHOLERA HOLOTOXIN AS AN ADJUVANT

FORMES MUTANTES DE L'HOLOTOXINE DU CHOLERA UTILISEES COMME ADJUVANT

Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 28102
Publication Year: 2002

Fulltext Availability:
Detailed Description
Claims

Detailed Description

... containing isolated and purified DNA sequence comprising a DNA sequence encoding an immunogenic, detoxified, mutant **cholera holotoxin** as described herein, and 3 0 wherein such a DNA sequence is operatively linked to...

...expression of the CT-CRM in a host cell. Preferably the regulatory sequences comprise an **arabinose** inducible **promoter** . In ... vector/host cell expression system where it is expressed preferably under the control of an **arabinose** inducible **promoter** . Any of the methods described for the insertion of DNA into an expression vector may...

...variety of host cell-vector (plasmid) systems may be used to express the immunogenic mutant **cholera holotoxin** . The vector system, which preferably includes the **arabinose** inducible **promoter** , is compatible with the host cell used.

The DNA encoding the mutant CT-CRMs are inserted into an expression system, and the **promoter** (preferably the **arabinose** inducible **promoter**), and other control 0 elements are ligated into specific sites within the vector so that...holotoxin molecules. It has previously been shown that the resulting yield of purified CT-CRME29H **holotoxin** 0 was approximately 50 gg per liter of culture medium (see International patent publication No...

...in yield was achieved through co-expression of the plasmid pIIB29H, and derivatives, with Vibrio **cholerae** DsbA and E coli RpoH. Co-expression and purification modifications increased the yield of CT...

...order to increase the expression of CT-CRMs of the present invention, the lactose inducible **promoter** in the plasmids was replaced with an **arabinose** inducible **promoter** (Invitrogen Corporation, Carlsbad, CA), which was operatively linked to the DNA sequence encoding the CT...

...was determined that plasmid pIIB29H contained a ctxA gene encoding CT subunit A from Vibrio **cholerae** strain 569B, linked to a ctxB gene encoding CT subunit B
33
from Vibrio **cholerae** strain 2125. Cross alignment of these genes indicated seven base substitutions between the two ctxB...

Claim

... nucleic acid molecule comprising an isolated and purified nucleic acid sequence encoding an immunogenic, mutant **cholera holotoxin** of any of claims 1-21, wherein the sequence encoding the immunogenic, mutant **cholera holotoxin** is operatively linked to regulatory sequences enabling
expression of said mutant **holotoxin** in a host cell.

59 The molecule according to claim 58, wherein said regulatory sequence is an inducible promoter.

60 The molecule according to claim 50, wherein said **promoter** is the **arabinose** inducible **promoter** ,
81
. The molecule according to claim 58, wherein said molecule is a viral or non...

...nucleic
acid molecule comprising an isolated and purified nucleic acid sequence encoding an immunogenic, mutant **cholera** **holotoxin** of any of claims 1-21,
wherein the sequence encoding the immunogenic, mutant **cholera** **holotoxin**
is operatively linked to regulatory sequences enabling expression of said mutant **holotoxin** in a host cell.

64 A method of producing an immunogenic mutant **cholera** **holotoxin** , wherein the cholera holotoxin has reduced toxicity compared to a wild-type cholera
holotoxin comprising...

2/6,KWIC/3 (Item 2 from file: 349)

00966050
MUTANT FORMS OF CHOLERA HOLOTOXIN AS AN ADJUVANT
FORMES MUTANTES DE L'HOLOTOXINE DU CHOLERA EN TANT QU'ADJUVANT
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 28348
Publication Year: 2002

Fulltext Availability:
Detailed Description
Claims

Detailed Description
... containing
isolated and purified DNA sequence comprising a DNA sequence encoding an immunogenic, detoxified, mutant **cholera** **holotoxin** as described herein, and wherein such a DNA sequence is operatively linked to regulatory sequences...
...expression of the CT-CRM in a host cell. Preferably the regulatory sequences comprise an **arabinose** inducible **promoter** . In one embodiment of this aspect, the invention relates to a plasmid, designated pLP903, that...vector/host cell expression system where it is expressed, preferably under the control of an **arabinose** inducible **promoter** . Any of the methods described for the insertion of DNA into an expression vector may...variety of host cell-vector (plasmid) systems may be used to express the immunogenic mutant **cholera** **holotoxin** . The vector system, which preferably includes the **arabinose** inducible **promoter** , is compatible with the host cell used. The DNA encoding the mutant CT-CRMs are inserted into an expression system, and the **promoter** (preferably the **arabinose** inducible **promoter**), and other control elements are ligated into specific sites within ...holotoxin molecules.

It has previously been shown that the resulting yield of purified CT-CRME29H **holotoxin** was approximately 50 gg per liter of culture medium (see International patent publication No. WO...yield was achieved through co-expression of the plasmid pIIB29H, and
34
derivatives, with Vibrio **cholerae** DsbA and E coli RpoH. Co-expression and purification modifications increased the yield of CT...
...order to increase the expression of CT-CRMs of the present invention, the lactose inducible **promoter** in the plasmids was replaced with an **arabinose** inducible **promoter** (Invitrogen Corporation, Carlsbad, CA),

which was operatively linked to the
DNA sequence encoding the CT...was determined that
plasmid pIIB29H contained a ctxA gene encoding CT subunit A from Fibrio **cholerae** strain 569B. linked to a ctxB gene encoding CT subunit B from Fibrio **cholerae** strain 0 2125. Cross alignment of these genes indicated seven base substitutions between the two...in E. coli could be achieved by substituting synthetic Shine-Delgarno sequences upstream of the **ctx** ,4 gene and placing the operon under the control of the **arabinose promoter** system CT operons containing site directed mutations in the A subunit were made as previously...

Claim
... claim 12 or 13.

37 An isolated and purified DNA sequence encoding an immunogenic, mutant **cholera** holotoxin ...nucleic; acid molecule comprising an isolated and purified nucleic acid sequence encoding an immunogenic, mutant **cholera holotoxin** of any of claims I -I 1, and wherein the sequence encoding the immunogenic, mutant **cholera holotoxin** is operatively linked to regulatory sequences enabling expression of said mutant **holotoxin** in a host cell.

39 The molecule according to claim 3 8, wherein said regulatory sequence is an inducible promoter.

40 The molecule according to claim 38, wherein said **promoter** is the **arabinose** inducible **promoter** .

41 The molecule according to claim 38, wherein said molecule ...the nucleic acid molecule of claim 38.

44 A method of producing an immunogenic mutant **cholera holotoxin** , wherein the **cholera holotoxin** has reduced toxicity compared to a wild-type **cholera holotoxin** and has a single amino acid substitution in the A subunit of the **cholera holotoxin** , comprising transforming, infecting, transducing or transfecting a host cell with the nucleic acid molecule according...

2/6,KWIC/4 (Item 3 from file: 349)

00836662
GENETICALLY STABLE CHOLERA VACCINES
VACCINS GENETIQUEMENT STABLES CONTRE LE CHOLERA
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 24269
Publication Year: 2001

Fulltext Availability:
Detailed Description

Detailed Description
... Effects of growth conditions on b-galactosidase activities in wild-type and nqr mutant V **cholerae** strains carrying a to.CT.-:IacZ reporter construct. Cells were grown in LB with a...

...mM HQNO.
FIGURE 3. Comparison of b-galactosidase activities in DtoxR DtcpP toxT--:1acZ V **cholerae** strains with or without the nqr::TnMar mutation carrying a plasmid expressing the tcpPH genes from an **arabinose** -inducible **promoter** (pBAD-PH). 0.02 % **arabinose** and 2.5 mM HQNO (A) were added as indicated. Effects of different media pH...proteins, we introduced the nqr::TnMar transposon insertion into a DtoxR DtcpP toxT.-:1acZ V **cholerae** strain (4). As reported previously (4), the

DtoxR DtcpP toxT.-:1acZ parent strain showed very...

...low b-galactosidase activity (Figure 3A). Overexpression of the tepP and tepH genes from an **arabinose** -dependent **promoter** can partially complement the toxR deletion for activation of the toxT.-:1acZ reporter construct (4...did not produce any flagella as analyzed by EM (FIGURE 6B).

Co=lementation of V **cholerae** and E coli DW strains with plasmids carryi@ng fliG.

The V **cholerae** predicted FRG protein has 39.5% amino acid sequence i dentity with the E. coli FliG proteinb (FIGURE 7A). To address whether the V. **cholerae** and E. coli F1iG proteins can functionally complement each other, we introduced plasmids with different.fliG genes under an **arabinose** inducible **promoter** into V **cholerae** and E. coli fliG-deletion strains. No restoration of the motility phenotypes as assayed in soft agar 1 5 plates was observed with either the V **cholerae** DfliG strain harboring the E. colifliG gene on a plasmid or the E. coli DfliG strain carrying the V **choleraefliG** gene on a plasmid (FIGURE 7Q. However, the respectivefliG genes did complement their parental mutations (FIGURE 7C). A fusion protein, consisting of the N-terminal portion of the V **cholerae** FliG fused to the C-terminal domain of the E. coli F1iG (FP- 1, FIGURE...

2/6,KWIC/5 (Item 4 from file: 349)

00555061
MUTANT CHOLERA HOLOTOXIN AS AN ADJUVANT
HOLOTOXINE MUTANTE DU CHOLERA UTILISEE COMME ADJUVANT
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 26636
Publication Year: 2000

Fulltext Availability:
Detailed Description
Claims

Detailed Description
... immune response of a vertebrate host by including an effective adjuvanting amount of a mutant **cholera** **holotoxin** , wherein the **holotoxin** has reduced toxicity compared to a wild-type CT and the glutamic acid at amino acid position 29 of the A subunit of the **cholera** **holotoxin** is replaced by an amino acid other than aspartic acid, in particular a histidine.

The which encode an immunogenic mutant **cholera** **holotoxin** having a substitution other than aspartic acid for the glutamic acid at position 29 of the A subunit of the **cholera** **holotoxin** , and wherein such a DNA sequence is operatively linked to an **arabinose** inducible **promoter** , as well as to suitable host cells transformed, transduced or transfected with such plasmids. The immunogenic mutant **cholera** **holotoxin** is produced by transforming, transducing or transfecting a host cell with a plasmid described above...made to express CT-CRME29H in E.coli. The resulting yield of purified CT-CRME29H **holotoxin** was approximately 50@Lg per liter of culture medium. Initial attempts to increase CT-CRM...

...moderate increase in yield was achieved through co expression of pIIB29H, and derivatives, with Vibrio

cholerae DsbA and E. coli RpoH. Co-expression and purification modifications increased the yield of CTCRME29H...
...mg per liter.

In order to increase the expression of CT CRME29HI the lactose inducible **promoter** was replaced with an **arabinose** inducible **promoter** (Invitrogen Corporation, Carlsbad, CA), which was operatively linked to the DNA sequence encoding CT-CRME29Mo During cloning it was determined that plasmid pIIB29H contained a ctxA gene from Vibrio **cholerae** strain 569B, linked to a ctxB gene from V.c. strain 2125. Cross alignment of...

...plasmids containing isolated and purified DNA sequences comprising DNA sequences which encode an immunogenic mutant **cholera** **holotoxin** having a substitution other than aspartic acid for the glutamic acid at position 29 of the A subunit of the **cholera** **holotoxin** , and wherein such a DNA sequence is operatively linked to an **arabinose** inducible **promoter** , as well as to suitable host cells transformed, transduced or transfected with such plasmids by...
...A variety of host cell-plasmid vector systems are used to express the immunogenic mutant **cholera** **holotoxin** . The vector system, which preferably includes the **arabinose** inducible **promoter** , is compatible with the host cell used. Suitable host cells include bacteria transformed with plasmid...

...system, The DNA encoding the CT-CRM is inserted into an expression system, and the **promoter** (preferably - 37 the **arabinose** inducible **promoter**) and other control elements are ligated into specific sites within the vector, so that when...the DNA encoding the CT-CRM is expressed by the host cell.

The immunogenic mutant **cholera** **holotoxin** is produced by transforming, transducing or transfecting a host cell with a plasmid described above...similar fragment from plasmid pMGJ142 which was shown to encode a ctxB gene from V. **cholerae** strain 569B, The resulting construct, pPX7490 encodes the CT-CRME29H ctxA and ctxB genes from strain 569B under control of the **arabinose** **promoter** , and has the LTIIb-B leader sequence.

Protocols for the large scale expression and purification...

Claim
... an isolated and purified DNA sequence comprising a DNA sequence which encode an immunogenic mutant **cholera** **holotoxin** having a substitution other than aspartic acid for the glutamic acid at position 29 of the A subunit of the **cholera** **holotoxin** , and wherein the DNA sequence is operatively linked to an **arabinose** inducible **promoter** . - 122

25 A host cell transformed, transduced or transfected with the plasmid of Claim 24.

26 A method of producing an immunogenic mutant **cholera** **holotoxin** , wherein the **cholera** **holotoxin** has reduced toxicity compared to a wild-type **cholera** **holotoxin** and has a substitution other than aspartic acid for the glutamic acid at position 29 of the A subunit of the **cholera** **holotoxin** , which comprises

transforming, transducing or transfecting a host cell with the plasmid of Claim 24...

2/6,KWIC/6 (Item 5 from file: 349)
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

00497090 **Image available**
CREATION OF HETEROIMMUNITY AMONGST CTXphi: METHODS AND COMPOUNDS FOR THE CONSTRUCTION OF IMPROVED i(V. CHOLERAE) VACCINES
HETERO-IMMUNISATION CONTRE CTXphi: PROCEDES ET COMPOSES EMPLOYES DANS L'ELABORATION DE VACCINS AMELIORES CONTRE i(VIBRIO CHOLERAE)
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 15870
Publication Year: 1999

Fulltext Availability:
Detailed Description

Detailed Description
... 177: 4121-4130, 1995), so that they were under the transcriptional control Of PBAD, an **arabinose** -inducible **promoter** .

Combinations of plasmids containing either of the two rstA:: lacZ reporters and either of the...
...CTX4) RstR repressors for rstA promoters
RAR Repressor* I
Classical (pHK2) El Tor (pHK1) V **cholerae** CTX4)
lysogen*'
Reporter -arabinose +arabinose -arabinose +arabinose Classical El Tor Classical rstA- 527 7 688...was used to donate derivatives of pGP52 (which encodes resistance to ampicillin) to Sm' V. **cholerae** strains. Matings were carried out be cross-streaking approximately equal numbers of donor and rec...

...each mating.

Plasmid constructions. pHK I contains the El Tor rstR gene cloned into the
arabinose -inducible **promoter** vector pBAD33 (Ptashne, M., supra) and was
constructed as follows: oligonucleotide primer
rstR-3 (5...

...2 (5'CCTCTAGATAGTATTACGGGGGT Y; SEQ ID NO: 16) were used to amplify rstR El from **CTX** (@ RF DNA with PCR. PCR products were purified using QlAquick PCR purification kit (Qiagen, Chatsworth...

2/6,KWIC/7 (Item 1 from file: 5)
DIALOG(R)File 5:(c) 2003 BIOSIS. All rts. reserv.

13956758 BIOSIS NO.: 200200585579
Genetic analysis of chemotaxis genes of Vibrio cholerae.
2002

...ABSTRACT: roles of chemotaxis in both the free-swimming as well as virulent phases of V. **cholerae** , no detailed genetic analysis of its chemotactic behavior has been performed. In the present study...

...several deletion mutants defective in putative chemotaxis genes and analyzed their motility behavior. The Vibrio **cholerae** genome revealed the presence of multiple sets of chemotaxis genes, including three cheA gene homologs...

...VC1397) or cheA-3 (VCA1095), gene is essential for chemotaxis under

standard conditions. A V. **cholerae** cheA-2 deletion strain carrying a plasmid with cheA-2 cloned under the control of an **arabinose** -inducible **promoter** showed marked increase in swarm circle size in the presence of arabinose. In contrast, the presence of the cheA-1 or cheA-3 gene, even when expressed from an **arabinose** -inducible **promoter** , did not complement the chemotactic defect, suggesting that the CheA-1 and CheA-3 proteins...
...of chemotaxis had no effect on virulence factor expression in vitro. Analysis of the V. **cholerae** genome also predicted the presence of approximately 40 MCPs. Amongst these, 3 ORFs (VC0512, VCA0658...

2/6,KWIC/8 (Item 2 from file: 5)
DIALOG(R)File 5:(c) 2003 BIOSIS. All rts. reserv.

12649573 BIOSIS NO.: 200000403075
TnAraOut, a transposon-based approach to identify and characterize essential bacterial genes.
2000

...ABSTRACT: efficient identification and characterization of essential genes by transcriptionally fusing them to an outward-facing, **arabinose** -inducible **promoter** , PBAD, located at one end of the transposon. In the absence of arabinose, such TnAraOut...

...pronounced growth defects. Of a total of 16 arabinose-dependent TnAraOut mutants characterized in Vibrio **cholerae** , four were found to carry insertions upstream of known essential genes (gyrB, proRS, ileRS, and...

...One of the essential genes identified by this analysis appears to be unique to V. **cholerae** and thus may represent an example of a species-specific drug target.

2/6,KWIC/9 (Item 1 from file: 357)
DIALOG(R)File 357:(c) 2003 Thomson Derwent & ISI. All rts. reserv.

0307227 DBR Accession No.: 2003-09012
Novel immunogenic, mutant cholera holotoxin useful for enhancing immune response of vertebrate host to antigen, comprises amino sequence of subunit A of wild-type cholera toxin - vector-mediated gene transfer and expression in host cell for recombinant vaccine and immunostimulant
2002

...ABSTRACT: presence of a new ApaI site) and confirmed by DNA sequencing. Arabinose promoted immunogenic, mutant **cholera holotoxin** (CT-CRM) expression vectors were constructed. Maximal production in E. coli was achieved by substituting...

... sequences upstream of the ctxA gene and placing the operon under the control of the **arabinose promoter** system. CT operons containing site directed mutations in the A subunit were made. CT-CRMs...
DESCRIPTORS: recombinant mutant **cholera holotoxin** , **cholera** toxin prep., plasmid, virus vector-mediated **arabinose** -inducible **promoter** gene transfer, expression in Escherichia coli, Haemophilus influenzae recombinant P4 outer membrane protein, virus, fungus...

2/6,KWIC/10 (Item 2 from file: 357)
DIALOG(R)File 357:(c) 2003 Thomson Derwent & ISI. All rts. reserv.

0307226 DBR Accession No.: 2003-09011
Novel immunogenic mutant cholera holotoxin for preparing immunogenic composition for enhancing immune response of vertebrate host to bacterial or viral antigen, has reduced toxicity compared to wild-type cholera toxin - vector-mediated gene transfer and expression in host cell for recombinant vaccine and immunostimulant 2002

DESCRIPTORS: recombinant mutant **cholera holotoxin** , **cholera** toxin

prep., plasmid, virus vector-mediated **arabinose** -inducible **promoter** gene transfer, expression in Escherichia coli, allergen, autoantigen, Haemophilus somnus, Moraxella catarrhalis, Streptococcus pneumoniae, Haemophilus...

2/6,KWIC/11 (Item 3 from file: 357)
DIALOG(R)File 357:(c) 2003 Thomson Derwent & ISI. All rts. reserv.

0303148 DBR Accession No.: 2003-04933
Replacing a target sequence of a bacterial chromosome with a donor sequence for treating bacterial or fungal infections, comprises introducing the polynucleotide construct into a bacterium expressing the lambda genes exo, bet or gam - vector-mediated gene transfer and expression in host cell for recombinant vaccine and gene therapy 2002

...ABSTRACT: a plasmid or lambda prophage. They can also be expressed under the control of an **arabinose** inducible **promoter** . The donor sequence comprises sequence encoding a polypeptide, which confers antibiotic resistance on the bacterium...

... Erwinia, or Xanthomonas. The bacterium is Escherichia coli, Salmonella typhimurium, Salmonella typhi, Salmonella enteritidis, Salmonella **choleraesuis** , Salmonella Dublin, Haemophilus influenzae, Neisseria gonorrhoeae, Yersinia enterocolitica, Bordetella pertussis, Brucella abortus, Vibrio **cholerae** , Clostridium tetani, or Bacillus anthracis. The polynucleotide construct is introduced into the bacterium by electroporation...
DESCRIPTORS: recombinant attenuated Escherichia coli, Salmonella typhimurium, Salmonella typhi, Salmonella enteritidis, Salmonella **choleraesuis** , Salmonella Dublin, Haemophilus influenzae, Neisseria gonorrhoeae, Yersinia enterocolitica, Bordetella pertussis, Brucella abortus, Vibrio **cholerae** , Clostridium tetani, Bacillus anthracis construction, plasmid-mediated lambda exo, bet, gam, **arabinose** inducible **promoter** , antibiotic-resistance marker gene transfer, expression in host cell, DNA primer, polymerase chain reaction, appl...

2/6,KWIC/12 (Item 1 from file: 35)
DIALOG(R)File 35:(c) 2003 ProQuest Info&Learning. All rts. reserv.

01886007 ORDER NO: AADAA-I3051200
Identification and characterization of essential genes in Vibrio cholerae
Year: 2002

italic>Vibrio **cholerae** </italic> is a Gram-negative bacterial pathogen that causes the human diarrheal disease **cholera** . We used <italic>V. **cholerae** </italic> in a screen for essential bacterial genes. We constructed a transposon that allows the...

...particular, for conditional-lethal mutations.
The transposon, TnAraOut, has at one edge, an outward-facing **arabinose** -inducible **promoter** , PBAD. Upon transposition into a genome, if the transposon disrupts a gene's natural promoter...

2/6,KWIC/13 (Item 1 from file: 51)
DIALOG(R)File 51:(c) 2003 FSTA IFIS Publishing. All rts. reserv.

00688284 95-01-c0093 SUBFILE: FSTA
Recombinant cholera toxin B subunit in Escherichia coli: high-level secretion, purification, and characterization.
1994

Development of an efficient expression and secretion system for **cholera** toxin subunit B (CT-B) is described. The CT-B gene (ctxB) was cloned into ...

...instead to the modified ompA signal sequence, and placed under the

control of the inducible **promoter** of the Salmonella typhimurium **arabinose** operon. Induction of E. coli with arabinose resulted in the export of high amounts of...

```
?logoff hold
       27jun03 13:19:45 User228206 Session D2004.3
            $0.17    0.052 DialUnits File155
               $0.05  1 Type(s) in Format 95 (KWIC)
            $0.05  1 Types
     $0.22  Estimated cost File155
            $1.29    0.273 DialUnits File349
               $1.25  5 Type(s) in Format  6
            $1.25  5 Types
     $2.54  Estimated cost File349
            $0.36    0.065 DialUnits File5
               $0.32  2 Type(s) in Format 95 (KWIC)
            $0.32  2 Types
     $0.68  Estimated cost File5
            $0.51    0.029 DialUnits File357
               $0.75  3 Type(s) in Format 95 (KWIC)
            $0.75  3 Types
     $1.26  Estimated cost File357
            $1.20    0.065 DialUnits File34
     $1.20  Estimated cost File34
            $0.24    0.031 DialUnits File71
     $0.24  Estimated cost File71
            $0.43    0.047 DialUnits File73
     $0.43  Estimated cost File73
            $0.94    0.049 DialUnits File440
     $0.94  Estimated cost File440
            $0.12    0.029 DialUnits File35
               $0.10  1 Type(s) in Format 95 (KWIC)
            $0.10  1 Types
     $0.22  Estimated cost File35
            $0.11    0.023 DialUnits File51
               $0.21  1 Type(s) in Format 95 (KWIC)
            $0.21  1 Types
     $0.32  Estimated cost File51
            $0.12    0.034 DialUnits File144
     $0.12  Estimated cost File144
            OneSearch, 11 files,  0.696 DialUnits FileOS
     $0.22  TELNET
     $8.39  Estimated cost this search
    $14.65  Estimated total session cost   3.747 DialUnits


### Status: Signed Off. (2 minutes)
```

WEST Search History

DATE: Friday, June 27, 2003

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=AND		
L1	lac and holotoxin.clm.	5	L1
L2	L1 and cholera	5	L2
L3	rappouli.in.	0	L3
L4	rappuoli.in.	133	L4
L5	L4 and (AB near3 5)	0	L5
L6	L4 and holotoxin	3	L6
L7	L6 and (promoter or lac or lacz or lac-z or arabinose)	2	L7
L8	arabinose near5 promoter	278	L8
L9	L8 and l4	0	L9
L10	L8 and (holotoxin or holo-toxin or cholera or ctx or ct)	111	L10
L11	L8 same (holotoxin or holo-toxin or cholera or ctx or ct)	2	L11
L12	L8 same (holotoxin or holo-toxin or cholera or ctx or ct).ti,ab,clm.	1	L12

END OF SEARCH HISTORY

WEST Search History

DATE: Friday, June 27, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=AND			
L1	clements.in. and ct and lt	9	L1
DB=PGPB; PLUR=YES; OP=AND			
L2	clements.in. and ct and lt	1	L2
L3	((lta or lt-a) near3 (ctb or ct-b))	2	L3
DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=AND			
L4	L3	2	L4
L5	((lta or lt-a) near3 (ctb or ct-b))	5	L5

END OF SEARCH HISTORY

tr

Q8VLI6

CtxA [CTXA] [Vibrio cholerae]

258 AA

align

Score = 512 bits (1319), Expect = e-144

Identities = 244/258 (94%), Positives = 245/258 (94%)

Query: 1 MVKXXXXXXXXXXXXXYANDDKLYRADSRPPDEIKQSGGLMPRGQSEYFDRGTQMNINLY 60
MVK YANDDKLYRADSRPPDEIKQSGGLMPRGQ+EYFDRGTQMNINLY
Sbjct: 1 MVKIIFVFFIFLSSFSYANDDKLYRADSRPPDEIKQSGGLMPRGQNEYFDRGTQMNINLY 60

Query: 61 DHARGTQTGFVRHDDGYVSTSISLRSAHLVGQTILSGHSTYYIYVIATAPNMFNVNDVLG 120
DHARGTQTGFVRHDDGYVSTSISLRSAHLVGQTILSGHSTYYIYVIATAPNMFNVNDVLG
Sbjct: 61 DHARGTQTGFVRHDDGYVSTSISLRSAHLVGQTILSGHSTYYIYVIATAPNMFNVNDVLG 120

Query: 121
AYSPHPDEQEVSALGGIPYSQIYGWYRVHFGVLDEQLHRNRGYRDRYYSNLDIAPAADGY 180
AYSPHPDEQEVSALGGIPYSQIYGWYRVHFGVLDEQLHRNRGYRDRYYSNLDIAPAADGY
AYSPHPDEQEVSALGGIPYSQIYGWYRVHFGVLDEQLHRNRGYRDRYYSNLDIAPAADGY 180
Sbjct: 121

Query: 181 GLAGFPPEHRAWREEPWIHHAPPGCGNAPRSSMSNTCDEKTQSLGVKFLDEYQSKVKRQI 240
GLAGFPPEHRAWREEPWIHHAPPGCGNAPRSSMSNTCDEKTQSLGVKFLDEYQSKVKRQI
Sbjct: 181 GLAGFPPEHRAWREEPWIHHAPPGCGNAPRSSMSNTCDEKTQSLGVKFLDEYQSKVKRQI 240

Query: 241 FSGYQSDIDTHNRIKDEL 258
FSGYQSDIDTHNRIKDEL
Sbjct: 241 FSGYQSDIDTHNRIKDEL 258

tr

Q8LTG8

CtxA [CTXA] [Vibrio phage CTX]

258 AA

align

Score = 510 bits (1313), Expect = e-144

Identities = 243/258 (94%), Positives = 243/258 (94%)

Query: 1 MVKXXXXXXXXXXXXXXYANDDKLYRADSRPPDEIKQSGGLMPRGQSEYFDRGTQMNINLY 60
MVK YANDDKLYRADSRPPDEIKQSGGLMPRGQSEYFDRGTQMNINLY
Sbjct: 1 MVKIIFVFFIFLSSFSYANDDKLYRADSRPPDEIKQSGGLMPRGQSEYFDRGTQMNINLY 60

Query: 61 DHARGTQTGFVRHDDGYVSTSISLRSAHLVGQTILSGHSTYYIYVIATAPNMFNVNDVLG 120
DHARGTQTGFVRHDDGYVSTSISLRSAHLVGQTILSGHSTYYIYVIATAPNMFNVNDVLG
Sbjct: 61 DHARGTQTGFVRHDDGYVSTSISLRSAHLVGQTILSGHSTYYIYVIATAPNMFNVNDVLG 120

Query: 121 AYSPHPDEQEVSALGGIPYSQIYGWYRVHFGVLDEQLHRNRGYRDRYYSNLDIAPAADGY 180
AY PHPDEQEVS LGGIPYSQIYGWYRVHFGVLDEQLHRNRGYRDRYYSNLDIAPAADGY
Sbjct: 121 AYRPHPDEQEVSGLGGIPYSQIYGWYRVHFGVLDEQLHRNRGYRDRYYSNLDIAPAADGY 180

Query: 181 GLAGFPPEHRAWREEPWIHHAPPGCGNAPRSSMSNTCDEKTQSLGVKFLDEYQSKVKRQI 240
GLAGFPPEHRAWREEPWIHHAPPGCGNAPRSSMSNTCDEKTQSLGVKFLDEYQSKVKRQI
Sbjct: 181 GLAGFPPEHRAWREEPWIHHAPPGCGNAPRSSMSNTCDEKTQSLGVKFLDEYQSKVKRQI 240

Query: 241 FSGYQSDIDTHNRIKDEL 258
FSGYQSDIDTHNRIKDEL
Sbjct: 241 FSGYQSDIDTHNRIKDEL 258

tr
Q8LTG8
CtxA [CTXA] [Vibrio phage CTX]
258 AA
align
Score = 508 bits (1309), Expect = e-143
Identities = 242/258 (93%), Positives = 243/258 (94%)

Query: 1 MVKXXXXXXXXXXXXXXYANDDKLYRADSRPPDEIKQSGGLMPRGQSEYFDRGTQMNINLY 60
MVK YANDDKLYRADSRPPDEIKQSGGLMPRGQSEYFDRGTQMNINLY
Sbjct: 1 MVKIIFVFFIFLSSFSYANDDKLYRADSRPPDEIKQSGGLMPRGQSEYFDRGTQMNINLY 60

Query: 61 DHARGTQTGFVRHDDGYVSTSISLRSAHLVGQTILSGHSTYYIYVIATAPNMFNVNDVLG 120
DHARGTQTGFVRHDDGYVSTSISLRSAHLVGQTILSGHSTYYIYVIATAPNMFNVNDVLG
Sbjct: 61 DHARGTQTGFVRHDDGYVSTSISLRSAHLVGQTILSGHSTYYIYVIATAPNMFNVNDVLG 120

Query: 121 AYSPHPDEQEVSALGGIPYSQIYGWYRVHFGVLDEQLHRNRGYRDRYYSNLDIAPAADGY 180
AY PHPDEQEVS LGGIPYSQIYGWYRVHFGVLDEQLHRNRGYRDRYYSNLDIAPAADGY
Sbjct: 121 AYRPHPDEQEVSGLGGIPYSQIYGWYRVHFGVLDEQLHRNRGYRDRYYSNLDIAPAADGY 180

Query: 181 GLAGFPPEHRAWREEPWIHHAPPGCGNAPRSSMSNTCDEKTQSLGVKFLDEYQSKVKRQI 240
GLAGFPPEHRAWREEPWIHHAPPGCGNAPRSSMSNTCDEKTQSLGVKFLDEYQSKVKRQI
Sbjct: 181 GLAGFPPEHRAWREEPWIHHAPPGCGNAPRSSMSNTCDEKTQSLGVKFLDEYQSKVKRQI 240

Query: 241 FSGYQSDIDTHNRIEDEL 258
FSGYQSDIDTHNRI+DEL
Sbjct: 241 FSGYQSDIDTHNRIKDEL 258

WEST

Generate Collection Print

L4: Entry 4 of 133 File: PGPB Apr 18, 2002

PGPUB-DOCUMENT-NUMBER: 20020044939
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020044939 A1

TITLE: Immunogenic detoxified mutants of cholera toxin

PUBLICATION-DATE: April 18, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Pizza, Mariagrazia	Siena		IT	
Fontana, Maria Rita	Siena		IT	
Giannelli, Valentina	Monteroni d'Arbia		IT	
Rappuoli, Rino	Castelnuovo Berardenga		IT	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
Chiron S.p.A.				

APPL-NO: 09/ 819917 [PALM]
DATE FILED: March 28, 2001

RELATED-US-APPL-DATA:
Application 09/819917 is a continuation-of US application 08/981208, filed December 22, 1997, ABANDONED
Application 08/981208 is a a-371-of-international WO application PC/T/IB96/00703, filed July 1, 1996, UNKNOWN

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	DOC-ID	APPL-DATE
GB	9513371.6	1995GB-9513371.6	June 30, 1995
IT	MI 91 A 03513	1991IT-MI 91 A 03513	December 31, 1991

INT-CL: [07] A61 K 39/38

US-CL-PUBLISHED: 424/184.1; 424/236.1
US-CL-CURRENT: 424/184.1; 424/236.1

REPRESENTATIVE-FIGURES: NONE

ABSTRACT:

An immunogenic detoxified protein comprising the amino acid sequence of subunit A of a cholera toxin (CT-A) or a fragment thereof or the amino acid sequence of subunit A of an Escherichia coli heat labile toxin (LT-A) or a fragment thereof wherein the amino acids at, or in positions corresponding to Ser-63 and Arg-192 are replaced with another amino acid. The immunogenic detoxified protein is useful as vaccine for Vibrio cholerae or an enterotoxigenic strain of Escherichia coli and is produced by recombinant DNA means by site-directed mutagenesis.

WEST

End of Result Set

☐ Generate Collection Print

L3: Entry 1 of 1 File: USPT Mar 18, 2003

DOCUMENT-IDENTIFIER: US 6534067 B1
TITLE: Rotavirus enterotoxin adjuvant

Detailed Description Text (150):
Lycke N, Tsuji T, Holmgren J (1992) The adjuvant effect of Vibrio cholerae and Escherichia coli heatlabile enterotoxins is linked to their ADP-ribosyltransferase activity. Eur J Immunol 22:2277-2281. Mbawuike I, Wyde P R (1993) Induction of CD8+ cytotoxic cells by immunization with killed influenza virus and effect of cholera toxin B subunit. Vaccine 11:1205-1213. Mbawuike I, Wyde P R, Anderson P (1990) Enhancement of the protective efficacy of inactivated influenza A virus vaccine in aged mice by IL-2 liposomes. Vaccine 8:347-352. Morris A P, Scott J K, Ball J M, Zeng, C Q-Y, O'Neal W K and Estes M K (1999) NSP4 elicits age-dependent diarrhea and Ca2-mediated I-influx into intestinal crypts of CF mice. American Physiological Society 277:G431-G444. O'Neal C, Clements J D, Estes M K, Conner M E (1998) Rotavirus 2/6 virus-like particles administered intranasally with cholera toxin, Escherichia coli heat-labile toxin (LT), and LT-R192G induce protection from rotavirus challenge. J Virol 72:3390-3393. Peterson J W, Finkelstein R A, Cantu J, Gessell D L, and Chopra, A K (1999) Cholera Toxin B Subunit Activates Arachidonic Acid Metabolism. Infection and Immunity 67:794-799. Tian, P, Hu, Y., Schilling, W P, Lindsay, D A, Eiden, J and Estes M K (1994) The Nonstructural Glycoprotein of Rotavirus Affects Intracellular Calcium Levels. J. Virol 68:251-257.

Other Reference Publication (9):
O'Neal, C. et al. Rotavirus 2/6 Viruslike Particles Administered Intranasally with Cholera Toxin, Escherichia Coli Heat-Labile Toxin (LT), and LT-R192G Induce Protection from Rotavirus Challenge; Journal of Virology, Apr. 1998, p. 3390-3393.